# APPARATUS AND METHOD FOR MAINTAINING PACKET
## SEQUENCING IN A PARALLEL ROUTER

**ABSTRACT OF THE DISCLOSURE**

A router for interconnecting N interfacing peripheral devices. The router comprises: i) a first switch fabric; ii) a second switch fabric; and iii) a plurality of routing nodes coupled to the first and second switch fabrics. Each of the routing nodes comprises an input-output processing (IOP) module for forwarding received data packets to other ones of the IOP modules via the first and second switch fabrics. A first one of the IOP modules forwards received data packets directed to a second one of the IOP modules by alternating between the first and second switch fabrics for each sequential data packet directed to the second IOP module. Breaks in the alternating sequence identify failed links and cause all traffic to be sent via the remaining good link. Support for multiple IOP modules and switch fabrics also is provided.